

## ABSTRACT

A process for forming an aryl-aryl bond comprises the step of reacting an arene hydrocarbon compound with either (1) an organic oxidant selected from the group consisting of a quinone, a quinone imine, a quinone diimine, and a nitroarene, or (2) an oxidizing salt selected from the group consisting of a triarylammonium salt, an oxonium salt, and a nitrosium salt, or (3) a hypervalent iodine compound, each in the presence of a Brönsted or Lewis acid.